COMPUTER SYSTEM OPERATIONS SPECIALIST SERIES

Code No.	Class Title	Occ. Area	Work Area	Prob. Period	Effective Date
4639(3287)	Computer System Operations Specialist I	02	737	6 mo.	02/26/02
4640(3287)	Computer System Operations Specialist II	02	737	6 mo.	02/26/02
4641(3287)	Computer System Operations Specialist III	02	737	6 mo.	02/26/02
4642(3287)	Computer System Operations Specialist IV	02	737	6 mo.	02/26/02

Promotional Line: 288

Series Narrative

Computer System Operations Specialists monitor, control, assess, and help maintain the operations of a computer that has a network of terminals, workstations, or other secondary computers connected to it and whose processing unit consists of a mini, large computer, or clustered computers. These systems allow real-time data access. Computer System Operations Specialists may, however, also be involved in computer operations that process the users' jobs at periodic intervals or on special request referred to as "batch" processing, and that use various storage media for entering data into and getting information from the computer than terminals alone.

Computer System Operations Specialists serve as a point of control to:

--start up, monitor, control, and bring down the operation of the computer system using the computer or administrator console, the consoles of equipment at remote sites, and other control/monitor units

--assess the performance of the computer system in order to maintain the parameters and standards of its operation and to assist in making corrections or improvements in them

--investigate and solve commonly occurring computer operations problems in order to maintain continuous service to terminal users, calling in and assisting higher-level technical-support personnel, supervisors, or vendors to deal with more serious problems

--explain operating procedures to users of the terminal network and assist them in the submission of their jobs

--may perform computer operations duties associated with batch processing of user jobs

--and, above the entry level, may have some degree of responsibility for the operations of the area (such as serving as lead workers, operators in charge, shift supervisors, or multi-shift supervisors)

The particular combination and emphasis among these various duties that are found in any one position depends on the type of computer installation it is found in and the level of the job. In general, operations specialists found in smaller installations are engaged in a wider range of activities than specialists at the same level in larger installations where greater specialization is possible.

Types of Computer Installations:

Computer System Operations Specialists may be found in a variety of computer installations. Four types are identified here for illustrative purposes to help differentiate the levels of work in the series. Computer System Operations Specialists would not have to be confined to just these types of installations however. The four types are:

--small installations, such as isolated, "stand alone" minicomputers with limited local terminal networks that might be found in large academic/research departments or on small satellite campuses

--intermediate-sized installations, such as remote job-entry (RJE) sites in distributed data processing systems that have a minicomputer that is connected to a mainframe "host" computer and a limited local network of terminals

--large installation, such as a mainframe computer with minicomputers and/or a large teleprocessing network connected to it

--very large installation, such as multiple mainframe computers serving as the host computer for an extensive distributed data processing and teleprocessing system that may consist of several intermediate-sized installations and an extended terminal network[1]

LEVELS OF WORK – INSTALLATIONS
The following chart summarizes the kinds of jobs that would be found in these various installations at the four work levels included in this series.

I.   Small – entry-level operations specialist
        Intermediate – entry-level operations specialist
        Large – entry-level operations specialist
        Very Large – entry-level operations specialist

II.   Small – operations specialist in charge
        Intermediate – journeyman operations specialist, may be lead worker or shift supervisor and may assist in supervision of area
        Large – journeyman operations specialist, may act as lead worker
        Very large – journeyman operations specialist

III.   Intermediate – supervisor in charge and advanced operations specialist
        Large – shift supervisor and advanced operations specialist
        Very large – advanced operations specialist, may assist in supervision

IV.   Large – multi-shift supervisor in charge of area
        Very large – shift supervisor

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[1]For a layman's explanation of the special terms used in the above paragraph and elsewhere in this specification, we recommend that you consult with someone in your campus data processing department.

DESCRIPTIONS OF LEVELS OF WORK

Level I: Computer System Operations Specialist I   **4639(3287)**
An entry level for persons in the computer system operations area. Employees initially perform fairly simple operations assignments and take on more difficult tasks as their knowledge and skills develop. A Specialist I refers operations problems to higher level employees and may provide elementary assistance to them in the solution of the problems. Their work is supervised closely by a supervisor or higher-level co-worker.

A Computer System Operations Specialist I typically –

1. monitor routine use of the computer system's resources and/or the services being provided by the host computer(s)

2. perform basic network operating procedures to ensure routine functioning of the network (such as inspecting modems or multiplexers, freeing or allocating data sets, or restoring teleprocessing lines as requested)

Level II: Computer System Operations Specialist II   **4640(3287)**
A level for employees who can perform the duties of a Computer Operations Specialist I and customary, day-to-day duties in the computer system operations area. In small installations, a Specialist II may also serve as the person in charge of the computer system operations area. In intermediate-sized and large installations they may act-as lead workers and, in the case of intermediate installations, assist in the supervision of the area or serve as a shift supervisor. A Specialist II performs their work assignments largely on their own and work under general supervision of a supervisor or a more advanced Specialist.

A Computer System Operations Specialist II typically –

1. maintaining the normal operations of a computer system (or portion thereof, e.g. RJE), such as by starting up, monitoring, assessing, controlling, and bringing down the system according to established objectives and strategies

2. conducting preliminary investigations of problems to define and inform higher level personnel on system hardware or software malfunctions and assisting them in the correction of the problems as instructed

3. answering questions about normal operational procedures from users and assisting them in the resolution of common Problems or referring them to other staff members

Level III: Computer System Operations Specialist III   **4641(3287)**
A level for advanced employees who can perform the duties of a Computer Operations Specialist II, out-of-the ordinary computer system operations assignments and deal with complex problems in the area. In intermediate-sized installations, a Specialist III generally serves as the supervisor in charge of the operations area (perhaps as the supervisor of multiple shifts). In larger installations, a Specialist III usually serves as the supervisor of a shift. A Specialist III requires little supervision and works fairly independently; they generally consult their supervisors only when they encounter an especially complex problem or a situation that might require deviation from standard practice or policy.

A Computer System Operations Specialist III typically –

1. serving as the chief operator and being able to deal with a wide range of or specialized computer system operations and problems (such as those involving major operating or telecommunications systems or specialized ones)

2. conducting preliminary investigations and consulting with higher level technical-support or supervisory/managerial personnel in the resolution of complex operations problems; and assisting them in the correction of the problems

3. monitoring computer system operations to ensure that established standards of service are being maintained; evaluating operations and recommending modifications to them; or assisting in the formulation of operations procedures or operating manuals

4. advising users of the computer system on complex operations procedures and assisting them in solving complex processing requests

5. assisting lower level Specialists in problem resolution and/or training them in computer system operations

Level IV: Computer System Operations Specialist IV   4642(3287)
A level for highly knowledgeable and experienced employees who can perform the duties of a Computer System Operations Specialist III, out-of-the-ordinary computer system operations assignments, deal with complex problems in the area, and generally oversee all activities in the computer operations area. In large installations, these employees usually serve as supervisors of multiple shifts of operators. In very large installations they generally are supervisors of single shifts of operators

A Computer System Operations Specialist IV typically –

1. supervise computer system operations and personnel in a large or very large installation, such as planning, scheduling, and assigning work, monitoring the overall functioning of the operations area, managing supplies, and training subordinate Specialists

2. coordinate response in operations area to emergencies and other serious operations problems and provide analytical and technical support to technical specialists

3. provide support to managers of the facility, such as evaluating operations and personnel, preparing reports, advising on technical matters (emergencies, new or revised practices or procedures, purchase or repair of equipment, expansion or modification of facility)

4. provide technical support to lower level Specialists or users on especially complex operations problems or the introduction of new or revised operations or procedures

MINIMUM ACCEPTABLE QUALIFICATIONS REQUIRED FOR ENTRY INTO

Level I: Computer System Operations Specialist I   **4639(3287)**

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. One year of work experience in

    (A) computer operations, data processing production control, or directly related computer duties

    AND/OR

    (B) data or voice communications (such as a repair technician for a computer or data communication vendor or in the military)

2. Any one, or any combination, of the following types of additional preparation:

    (A) vocational training in any related phase of data processing

    (B) college course work in data processing or computer science

    that totals 1.0 unit according to the following conversion rates:

    9 months of "a" = 1.0 unit

    12 semester hours of "b" = 1.0 unit

    Amounts of experience or training less than those listed above should be converted to decimal equivalents of 1.0 unit and added together when computing combinations of the different types of preparation.

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. Basic knowledge of data processing, including software, telecommunications, and hardware technology

2. Arithmetical skills

3. Verbal and written communication skills

4. Mechanical ability

5. Logical orientation to problem solving

6. Ability to work under pressure in a production setting

7. Ability to work effectively with other persons and follow instructions

8. Accuracy

9. Physical dexterity

10. Ability to lift heavy objects

Level II: Computer System Operations Specialist II   4640(3287)

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. Two years of work experience in performing computer operations duties comparable to those at Level I of this series

2. (A) One year of work experience in computer operations or in a related phase of data processing

AND

(B) Any one, or any combination, of the following types of additional preparation:

(i)   vocational training in any related phase of data processing

OR

(ii)   college course work in data processing or computer science

that totals 1.0 unit according to the following conversion rates:

9 months of "a" = 1.0 unit

12 semester hours of "b" = 1.0 unit

Amounts of experience or training less than those listed above should be converted to decimal equivalents of 1.0 unit and added together when computing combinations of the different types of preparation.

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. Working knowledge of computer system operations, including software, telecommunications, and hardware technology (such as software monitoring packages, data communications technology, job control language, and utility programs)

2. Ability to maintain normal operations of the computer system (such as operation of computer console and tape devices)

3. Ability to recognize and react to operations problems calmly and rationally

4. Ability to communicate effectively with data processing staff and users

5.   Ability to work under pressure in a production setting

6.   Ability to work effectively with others

Level III: Computer System Operations Specialist III   **4641(3287)**

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1.   Three years of work experience in performing computer operations duties comparable to those at Level II of this series

2.   (A)   Two years of work experience in computer operations or in a related phase of data processing

<div align="center">AND</div>

(B)   Any one, or any combination, of the following types of additional preparation:

(i)   vocational training in any related phase of data processing

<div align="center">OR</div>

(ii)   college course work in data processing or computer science

that totals 1.0 unit according to the following conversion rates:

9 months of "a" = 1.0 unit

12 semester hours of "b" = 1.0 unit

Amounts of experience or training less than those listed above should be converted to decimal equivalents of 1.0 unit and added together when computing combinations of the different types of preparation.

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1.   Advanced knowledge of computer system operations, including software, telecommunications, and hardware technology (such as central processing unit(s), operating systems, software and hardware monitoring packages and procedures, data communications technology, job control language, and utility program)

2.   Ability to interpret and follow through on complex operations problems

3.   Ability to lead other persons

4.   Ability to communicate effectively with data processing staff and users

5. Ability to work under pressure in a production setting

6. Ability to work effectively with others

Level IV: Computer System Operations Specialist IV   4642(3287)

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. Five years of progressively responsible work experience in computer operations, two of which were comparable to Level III of this series

2. One year of supervisory experience**, in addition to the requirement in #1.**

PERSONAL ATTRIBUTES NEEDED TO UNDERTAKE JOB

1. Extensive knowledge of computer system operations, including software, telecommunications, and hardware technology (such as central processing unit(s), operating systems, monitoring packages and procedures, data communications technology, job control language, and utility programs)

2. Ability to supervise persons and coordinate operations effectively

3. Ability to diagnose and coordinate response to serious operations problems

4. Ability to communicate effectively with data processing staff and users

5. Ability to work under pressure in a production setting

6. Ability to work effectively with others

Computer System Operations Specialist I ....REVISED
Computer System Operations Specialist II...REVISED
Computer System Operations Specialist III ....REVISED
Computer System Operations Specialist IV ....REVISED